

THE RICHMOND DISPATCH.

WHOLE NUMBER, 11,346.

RICHMOND, VA., SUNDAY, NOVEMBER 13, 1887.

THREE CENTS PER COPY.

THE PROGRESS OF THE PRESS.

A Printing Machine a Type of the Times in which We Live.

NEWSPAPERS' WORK.

The Part They Have in the Public Life and Progress.

HOW NEWS IS GATHERED

Something of the Labors of the Publishers and Editors.

MODERN MACHINERY.

Comparisons with the "Slow Coaches" of Olden Times.

THE EQUAL OF THE HOUR.

Hoe's Perfecting Web Press Up to the Demands of the Period.

THE WAY IT WORKS.

Impressing and Stereotyping Forms, Printing and Folding the Sheets.

HOW PAPERS ARE MADE.

Glimpses Into a Hive of Busy Industry—Day and Night-Labors.

DISPATCH HISTORY.

A Glimpse at the Past and a View of the Present of this Paper.

A city is known by its newspapers. Far and wide over the land, the sheets from the printing-press fly, mirroring to their readers the life of the community whence they come. The advertising columns reflect the business; the editorial, news, and local picture society. The hum of the machinery in the manufacture, the "push" of the merchant offering his wares, the whistle of many railroad trains coming and going; of numerous steamers arriving and departing, and the hurry and bustle of the great thoroughfares of trade, all may be well imagined by the stranger who takes up a representative paper. And there is in general part of mutuality in the matter that, as grows the press, so grows the city; as expands the press, so expands the city. The *Dispatch* has endeavored to keep its place in this well-settled order, and while it has not done all it wished to do, and yet hopes to do, in the way of progress, it feels that its constituency must feel some interest in its affairs, and must be glad to hear that it is preparing itself to do Richmond better service than ever before.

THE PRESS.
The press when it was taken to typify the great business of editing and publishing was a rude and tediously slow piece of machinery—no more to be compared with the machines of to-day than the stage-coach of a hundred years ago with a lightning express-train, or the signal fires of Homeric times with his telegraphs and telephones of this happy age. Century after century has seen the printing press being improved until now it really seems that there is an invention which will keep pace with modern progress.

The type-setting of to-day is done pretty much as it has been for ages. The human intelligence—the quick brain, the swift hand, the ready eye—no adequate substitute has ever been found, and thousands of compositors now find employment where there was but a few. The increasing intelligence of the population demands more reading matter. Every spiritually man wishes to know to-day what happened throughout the world yesterday. Hence have come into life press associations, special correspondents, editors, and reporters—men who, what happened in China yesterday you desire to read this morning or not at all. You wish to have a glance at yesterday's European affairs, at the New York stock market, at the reports from Washington, and above all you are interested in Richmond and Virginia. To collect all this matter, shape it, and transmit it to its destination is the work of an army of men. Even to the richest journals, and the London *Times*, for instance, is valued at \$25,000,000 to cover the world without these agencies would be impossible without the co-operative system—the press associations, etc., etc. Every night between 6 and 2 o'clock all this matter is coming to the editors, and with it a vast amount of local work, of country correspondence, etc. To weed out here, to amplify and explain there, to edit, "head," "sub-head," and put the manuscript "copy" into the compositor's hands is a great work; always, too, a hurried work.

Resolving the composing room the foreman, or his assistants, cuts the "copy" into short "takes" (pieces), and to each of the twenty, thirty, or forty compositors, as the case may be, a take is given, when set up in type is shoved into a galley, whence it goes to the proof press. When the proof is read and corrected then all the type that has been set is assembled into forms, pages, enclosed in an iron-frame work and made ready for the press.

THE NEWS.
It is now several hours past midnight. Very likely it is near daybreak. The mailing clerks and the news agencies are clamoring for their papers to go off by the early mail. Carriers by the score with loud and angry voices "demand their papers," and there is great hurry and worry.

The problem to be solved is how to keep open your forms to the latest possible hours for telegraphic and local news and then print off your edition in time to catch the earliest outgoing trains; in time to be put into the hands of carriers, who will take them before the breakfast-hour to subscribers all over the city and suburbs.

This is what has pinched the ingenuity of man—of thousands of men, indeed. Long ago the stereotyping process offered a partial solution. Plates can be made on the type, and you may have two, four, six, twelve presses all going at the same time; all printing the same sheet. But this multiplication of presses requires much room, many hands, and great expense. The *Dispatch* was long printed first on one and then on two of Hoe's double

cylinder presses. Three years ago they were taken out, and one of Hoe's four-cylinder type-revolving machines put in. That was fast press, but not fast enough for those hours of the morning when trains were about to leave without the *Dispatch*; when carriers were telling that the people insisted that the paper should be delivered before breakfast (no matter how early) and would take no excuse, and when, with a growing city and an improving State, our editions—daily, semi-weekly, and weekly—were constantly mounting up. There was but one remedy, one path of safety—a Hoe perfecting web press; which was recently bought and has just been put in place at a cost (with consequential improvements) of \$22,500.

Every night now our forms are stereo-

graphed by the nation with jealous care as one of the most interesting relics of the great press.

AMERICA'S EXCELLENT PRINTING.
The first important American improvement in presses is said to have been that made by George Clymer, of Philadelphia, about 1817, consisting of the application of the power by means of a compound lever; but a dozen years later the Washington press of Samuel Rust had superseded it. The Washington press, with a man to operate the lever and a boy to apply the ink, would turn off about 2,000 papers in a day, and, after a time, a self-inking apparatus was devised which enabled a man to do the work without the aid of a boy.

The first power press produced in America was the invention of Daniel

sand impressions could be struck off in an hour. No wonder the lords of the Press Council of England, in granting an extension of the patent, characterized the invention as "the greatest step ever made in the printing art." The honor of using the first press of this kind ever made belongs to the Philadelphia *Public Ledger*; the first ten-cylinder press was made for the New York *Tribune*, in 1855, and the first sent to Europe was for *La Patrie*, of Paris, in 1848. The London *Times*, after experimenting with a clumsy vertical rotary press, constructed by Augustus Applegarth, which was a big failure, ordered two Hoe ten-cylinder presses in 1857. This press was supreme for a quarter of a century; but, grand as was this triumph of inventive genius, it is already half forgotten.

printed sheets were separated from the web by a serrated blade and tension rollers, as in many of the perfecting presses now used, and made stereotype plates from a paper-mache matrix, the material still considered the best. This press was patented in England, on March 7, 1853, but not with success—partly because it failed to deliver the sheets as fast as printed, and partly because the process of stereotyping, as then understood, involved too much delay. It was not until 1861 that the latter difficulty was overcome by Charles Hoe, a New York engraver, whose improved stereotyping process was at once adopted by the New York *Tribune*, and has proved a complete success, the whole operation requiring but fifteen or twenty minutes.

With water. The cylinder as it revolves carries just enough water on its surface to dampen the paper to the right degree. Its surface is cut with a broad spiral groove running from the centre to the right and left. The advantage of this is that while it was sufficient of the paper for all practical purposes it leaves enough dry space to preserve the strength of the paper and prevent its tearing as it draws through the machine. As some other qualities the wetting cylinder is driven with a belt and pulleys so that the supply of water may be regulated at will. When the machine is started the empty core which rests on the driving cylinder begins to revolve with it, draws the paper off from the dry roll, and winds it upon itself, and as the wet roll grows

the impression of pages 1 and 4 being given to the reverse side of the paper. As the stream of paper, now printed on both sides, issues from the last cylinder, it contains a row of the *Dispatch* placed end to end. These papers must now be separated from the web, and this process is in itself an ingenious one. The paper is conducted between a third pair of cylinders, in one of which along its whole length is a cutting-knife which works into a corresponding groove in the other, and this blade divides the paper into sheets of four pages—not wholly divided, however; the continuity of the web needs to be preserved for a fraction of a second longer, and a few points of attachment are consequently left between the parts until they are fairly started in a series of faster

first place—not to be subordinated to policies or personal affairs.

RICHMOND DISPATCH.

When Cowardin & Davis resolved to start their paper the city was quite well supplied, as the following list of that year will show:

The Richmond Whig: Heath, Elliott & Co., editors and proprietors; office corner Governor and Franklin streets.

The Richmond Republican: Robert H. Gallaher and E. A. Gallaher, publishers; Oliver P. Baldwin and Robert H. Gallaher, editors; office Tenth below Main street.

The Richmond Times: William C. Carrington, editor and proprietor; office on Twelfth street between Main and Cary.

The Richmond Enquirer: By William F. & Thomas Ritchie, Jr.; office corner of Main and Eleventh streets, next below American Hotel.

The Richmond Examiner: By B. M. DeWitt & John M. Daniel; office on Main street five doors below Exchange Bank.

All dailies except the *Examiner*, which was semi-weekly.

THE DISPATCH STARTED.

The name of the paper agreed upon was the *Daily Dispatch*. Hugh B. Pleasant, Esq., was employed as editor, and an office and composing room was secured on Governor street in a building which occupied the site of the present wholesale clothing-house of Weisiger & Tiffany. The first paper was issued on the morning of October 19, 1850. It was a sheet about a third of the size of the *Dispatch* as it now is, and the edition was 900 copies, which, as Cowardin & Davis had not then obtained a press, was worked off—printed at the job-office of Johnson, Bayard & Co.

The paper was favorably received from the start, and being sold for one cent a copy at once attained a good circulation. But the *Whig* and *Enquirer* were great political papers, and the *Whig* merchants regarded it as a duty to advertise in the *Whig*. The Democrats were no less loyal to the *Enquirer*, and other advertising was controlled by the three other papers, so that the business being much cut up, the *Dispatch* did not at once command a great advertising patronage. Its success in that important direction was gradual—so gradual, indeed, that after a few months Mr. Davis became convinced that it could never be established as a paying enterprise. He therefore sold out his interest to Mr. Cowardin, who, with his sanguine disposition, saw a great future for the paper where others could discern but a doubtful venture. Mr. Davis lived to see the *Dispatch* a valuable property, and met his death at the Capitol disaster April 27, 1870.

THIRTEENTH AND MAIN.

But to go back: For years and years the *Dispatch* was published with the name of James A. Cowardin as proprietor and Hugh B. Pleasant as editor, and when its success became assured the office was removed to the southeastern corner of Main and Thirteenth streets, in a building which preceded the present one, which is occupied by the Old Dominion Steamship Company. There the *Dispatch* was comfortably housed and equipped.

Mr. Oliver P. Baldwin succeeded Mr. Pleasant as editor, but at one period—about 1861—they were both writing for the paper, and Mr. Cowardin, for a time, for other engagements, also contributed.

Mr. Hamner managed the counting-room, and during the war acquired a half interest in the paper.

EFFECT OF WAR ON NEWSPAPERS.

The Richmond papers were published during the war under peculiar difficulties. Such were the demands on the army it was a great struggle to get the men necessary to set the type and work off the paper. There was more trouble still in getting the paper whereon to print. There were but a few paper-mills in one time, and these had to give preference to the orders of the Confederate Government, and the stuff they turned out for the newspaper offices was white only in name. Ink, too, was scarce; such was run through the blockade was very costly; such as was made here was not good. These and many other troubles confronted Mr. Cowardin and Mr. Hamner during the war. Worse than all, however, their type was worn out, and the new dress could not be procured in the Confederacy. Mr. Hamner undertook to run the blockade and go to England and get a new outfit. Before going he sold one-half of his one-half interest in the paper to Mr. James W. Lowellen, who had long been the active and efficient local editor.

Mr. Hamner obtained the outfit and got it through the blockade and into the *Dispatch* office, but before it could be used for the first time it and all the contents of the building was destroyed in the great fire of the evacuation, April 3, 1865.

RETURNED AT THE EVACUATION.

Sunday night, April 1, 1865, Mr. Cowardin went to visit his family in Halifax. Sunday President Davis, sitting in St. Paul's church, received the telegram from General Lee that his army must retreat. Monday the city was on fire, and the *Dispatch* office was destroyed.

Owing to military restrictions Mr. Cowardin could not get to Richmond from Halifax for six weeks. In the mean time, Mr. W. L. Cowardin, his brother, acting for him, together with Mr. Lowellen, sought permission from the military authorities to revive the *Dispatch*. A positive refusal was the answer.

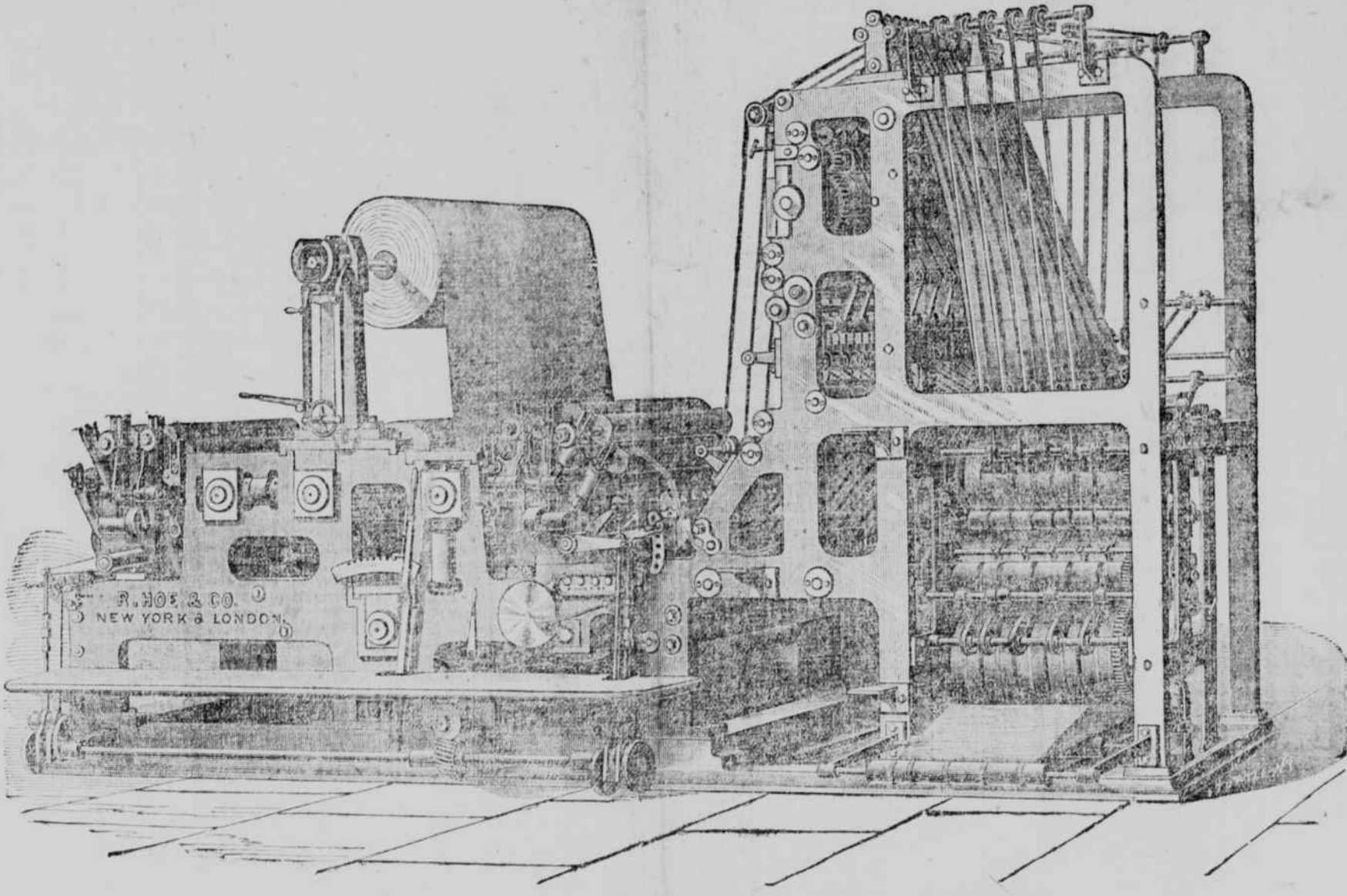
NEWSPAPER REVIVALS.

The *Whig* office escaped destruction, and that paper proceeded with its publication. The job-office of C. H. Wynne, northwest corner of Main and Fourth streets, was also saved, and from there in a few days issued the *Richmond Times*, of which H. Rives Pollard, who had been on the *Examiner* under John M. Daniel, was the managing editor and Patrick Henry Aylett, editor-in-chief. They sprang from the upper floors of the building where now the *State* is, then but lately occupied by the Confederate Government as a bureau for the printing of small currency. Other papers soon followed.

It was not until December that Mr. Cowardin, having joined with him Mr. Henry K. Ellyson, under the firm-name of Cowardin & Ellyson, editors and proprietors, revived the *Dispatch*.

Mr. Ellyson is a practical printer. For many years before the war he was the proprietor of a job-printing establishment, and was a personal friend of Mr. Cowardin. He had served in the Legislature with Mr. Cowardin, had also been Sheriff of Richmond (afterwards Mayor of Richmond), and was known as a prudent business-man. The pleasant business relations thus formed continued in existence until the death of Mr. Cowardin; the latter always managing the editorial department, while the former gave his attention to the multitudinous details involved in the supervision of the mechanical and business departments and to securing proper news-service.

They secured the building on Governor street, just in the rear of the old *Dispatch* office, and now a part of that building. There, just opposite the *State*, the paper was first issued, it was revived and remained for a few years, and until removed to its present building, northwest corner Main and Twelfth. Those were



THE FASTEST PRESS IN THE WORLD

apud. The plates are put upon the cylinders. The paper spins out from a roll and is printed, and folded "at one stroke," almost, and when every part is running at its best our press can print and fold 24,000 copies per hour.

This sheet is a sample of the press's work, but it is hardly doing its best as yet. All new machinery works a little roughly at first. With it the *Dispatch* will print a bright-looking paper every morning, and the eight-page paper is, as the reader will see, cut at the top and the leaves pasted. Now we expect to send out the papers early enough for everybody, and what is very important, it means to keep its pages open every night for the very best reasons.

As grows Richmond so grows the *Dispatch*.

The First Printing.

The printing press is a more ancient invention than is commonly supposed, the earliest being in existence about 1520. Block printing is believed to have been introduced in China in the sixth century, and the Chinese method was known in Italy, Spain, Sicily, and perhaps in other countries, late in the twelfth century, but it was not until the production of movable types that the first printing-press was invented.

In block printing the Chinese used a brush, and it is possible that the same method was employed to obtain the earliest impressions from type; but it is commonly believed that a mallet and planer, as the block of hard wood is called which smooths the surface of a page of type before a proof is taken, were the implements of printing of this type until the invention of the first printing press.

The press represented in the engraving to which reference has been made, was small and slow, the size of its sheet being only two folio pages, for each of which a pull of the lever was necessary; but a century or more was required to produce the much-improved press of Blaew in Amsterdam, and Blaew's press was supreme for about a century and a half.

MR. FRANKLIN'S PRESS.

One of the curiosities of the Patent Office, Washington, is the press upon which Benjamin Franklin worked in 1723, two years after a disagreement with his brother resulted in his departure from Boston. He first went to Philadelphia, and a year afterward he was promised the government printing by Governor Keith, and was sent to Europe to buy material; but, finding himself deceived, he was compelled to work his way home, and for eighteen months he toiled as a journeyman printer in London, using what was known as the "galleys press"—a machine which is now

rather than a single invention, the product of many different minds working toward the same result. Sir Rowland Hill, the well-known advocate of cheap postage in England, was the first to construct and patent, in 1825, a rotary web perfecting press; that is, one to print a roll of paper on both sides, from cylinders, cut it into sheets, and pile them. His invention, however, was too far in advance of his time, and never came into use, owing partly to the inconvenience of the coiled type, which he used on his type cylinders, and partly to the difficulty of disposing of the sheets as fast as printed.

In 1842 Jephtha A. Wilkinson, of New York, built a similar press, also using coiled type, but it failed in operation, he used on his type cylinders, and partly to the difficulty of disposing of the sheets as fast as printed.

The Web Press.

In 1849 Jacob Worms, of Paris, hit upon the idea of curved stereotype plates secured to a rotating cylinder. Worms even built a press in which

which now bears his name. The press known as the Worms press, which prints the London and New York *Times*, is very similar to Hullock's, with the addition of several improvements in the matter of detail, which give it greater speed.

The well-known firm of R. Hoe & Co. have stood abreast of the improvement of the age in manufacturing printing presses equal to the astonishing improvements of the past twenty years in printing news by cable, by telegraph, and even by telephone, and have in their great factory brought out new and improved forms of the web perfecting press. They have made and put in operation nearly two hundred of these machines, some of which print, cut, paste, fold, count, and deliver eight, ten, and twelve-page papers at a rate of speed of 30,000 per hour, and four-page sheets at double that speed.

A searching inquiry as to the merits of the machines of rival manufacturers decided us to order from R. Hoe & Co. one of their famous presses with all the latest improvements, and it is on this machine that the paper now presented to our readers is printed. The accompanying engraving represents the new press as it is constructed so as to print an eight-page paper or a four-page paper. It cuts out the eight-page paper at the head, delivering them folio after folio, in a word, it is a marvelous work of the ingenuity of man. For speed, exact workmanship, compactness, and simplicity it unquestionably excels all similar machines in the world.

SETTING THE PAPER.

The paper for the press is received from the paper-mill in rolls wound on hollow spools or cores. The rolls are about thirty-six inches in diameter and contain from four to five miles of paper. To wet the paper a spindle is run through the roll, and the roll is lifted into bearings at one end of the wetting-machine; a friction-trap is passed around a pulley on one end of the spindle and attached to a lever, which is used to regulate the strain on the paper as the roll is unwound. Another core is then placed on the spindle, and this is placed in bearings which are connected to a slide on inclined brackets at the opposite end of the machine. The end of the paper is passed under a roller, along a trough to a second roller, and thence up and over a driving cylinder, and is pasted to the iron core just mentioned, which rests on the driving cylinder, and is driven by friction with it. As the paper passes up to the driving cylinder it comes in contact with the wetting cylinder, which revolves in an iron trough that is automatically filled

larger the bearings in which its spindle turns slide higher upon the brackets. When the paper is entirely unwound and wound in a damp roll it is taken from the machine and is ready for the press. This machine works at almost railroad speed. The driving cylinder makes two hundred revolutions per minute, and makes a mile of paper in four minutes, or at the rate of fifteen miles per hour.

HOW THE STEREOTYPED PLATES ARE MADE.

All papers of large circulation are printed from the stereotype plates, and not from the type. The impression of the type is received by a paper-mache matrix, from which are produced solid metal plates, the exact facsimile of the form to be printed, and curved to fit on the cylinders of the press. This matrix is made by placing on the face of the type several thicknesses of damp paper pasted together. The impression is made by forcing the paper on to the type by a rolling-machine, or by beating with a brush. The form, with the paper thus pressed into the face of the type, is then transferred to a steam drying table, where, under heavy pressure to prevent its shrinking or warping under the process, it is dried and comes off brown and hardened into a complete matrix and ready for the casting process.

The metal is kept in a molten state in a furnace. After the matrix has been secured to the concave side of the curved casting box, the metal is poured in, and in a few seconds the rough stereotype plate is taken out of it. This is then trimmed and beveled at the ends so as to fit on the cylinders of the press, and the workmen go over it rapidly and cut out the large blanks. It is next placed in a machine where a revolving knife shaves its inner surface until the shell has a uniform thickness. For each edition of the *Dispatch* two plates are taken of each page.

HOW THE PRESS WORKS.

Briefly, the press may be said to consist of two pairs of cylinders. They are two type cylinders, each carrying the stereotype plates of four pages, and each running against its companion impression cylinder, covered with a blanket, which presses the paper against the inked surface of the plates. The ink is supplied by a series of catenar rollers, which receive it from a reservoir and pass it on, the last rollers of the set revolving in contact with the plates.

The plates having been secured on the cylinder of the press and the dampening roll, containing

FIVE MILES OF THE DISPATCH.
having been placed in position, the machine is started, and the web of paper unwinds at the rate of ten to twelve miles an hour. It first makes a half-mile turn around a cylinder of polished wood, which takes out of it all the wrinkles and creases resulting from the dampening, and then passes between the first pair of type and impression cylinders. The press is so arranged, as has already been said, that either a four-page or an eight-page paper can be printed. Each type cylinder carries the plates for four pages, and when the usual four-page edition of the *Dispatch* is to be printed, the first type cylinder carries two sets of pages, 2 and 3, with the columns running around the cylinder. After receiving the impression from this cylinder, the paper is carried to the second type cylinder. To this are attached in the same way two sets of plates of the other two pages, and the process of printing is speedily completed.

running tapes leading to a collecting loop or cylinder (used for eight-page sheets), at which point their speed is increased, and the separate sheets break away from their companions which follow them and hurry on toward the upper part of the folder, from whence they pass down in front of the folding "triangle." This ingenious but simple device is triangular in form, and its shape is such that, as the sheets glide smoothly down it, their outer edges are curved downward and inward until, on leaving the triangle, they gradually meet between a pair of rollers, thus receiving an up-and-down fold in the centre of the margin between the pages, which brings them to page size.

These once-folded sheets are hardly clear of the triangle when they are seized by the fingers of a folding cylinder and carried down over a pair of revolving rollers. Just as the centre of the sheets reaches the rollers a rotating folding-blade in the cylinder suddenly runs outward and strikes the sheets and forces them down in between the two rollers, which nip and draw the doubled sheets through, folded across the columns to half-page size. A switch placed just below these rollers can be set so as to direct the sheets as they issue from them either to the right or left. If the sheets are to be delivered half-page, or carrier size, they go to the left and drop in succession into a series of curved arms, which revolve in unison with the sheets, and which deposit them gently in a neat pile on a slowly moving apron.

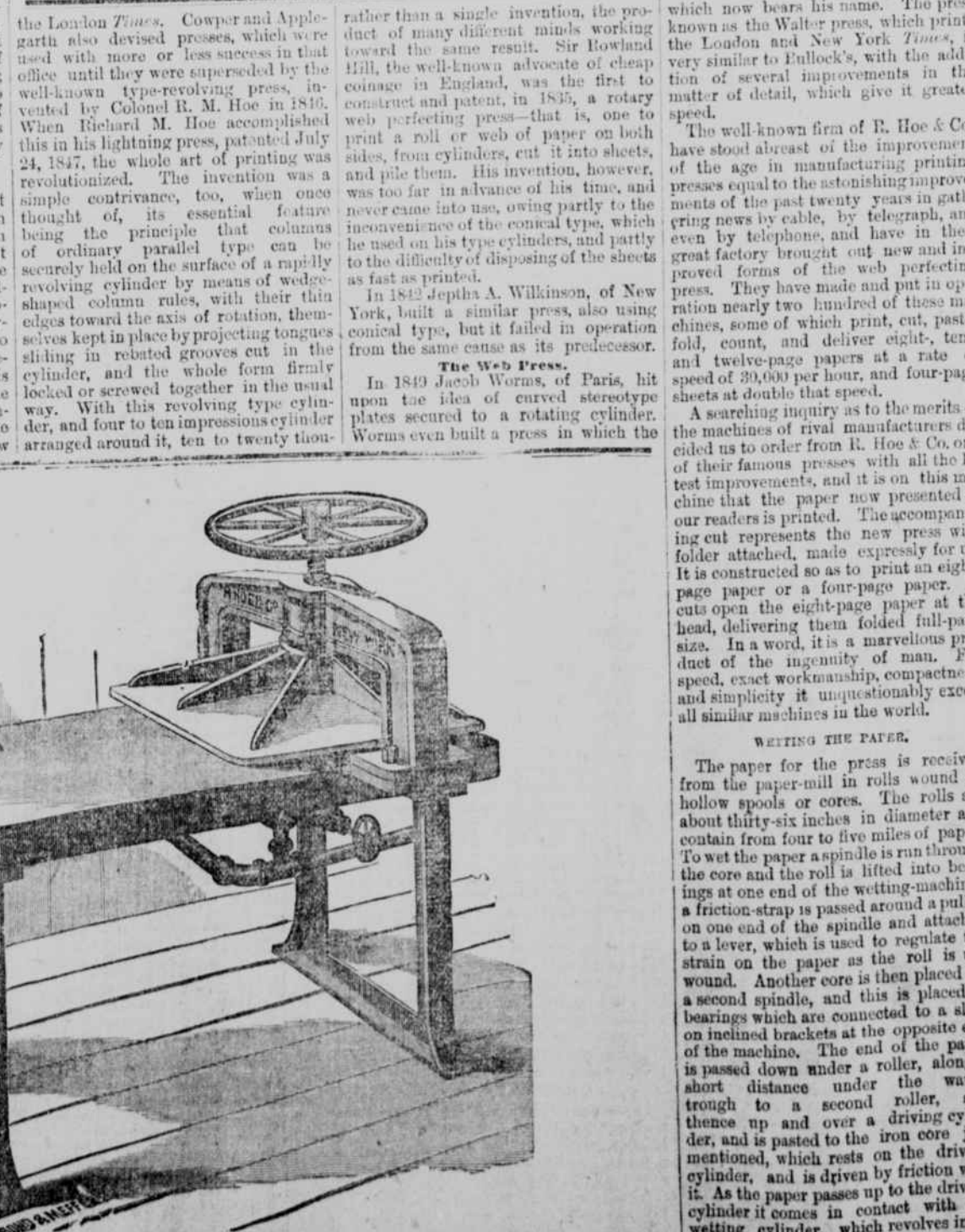
If the sheets are to be folded for mailing the switch directs them to the right, and they pass down into a basket-folder, which is a kind of modified triangle, and are again folded at right angles to quadruple or mail size, and are piled by revolving curved arms in the same manner as the half-page size.

FOR EIGHT-PAGE EDITIONS.

For eight-page papers the first type cylinder will carry the plates for pages 4 and 5, 2 and 7, and the second cylinder will carry pages 3 and 6, 1 and 8, and the web of paper printed from them will be cut into four-page sheets as before, one sheet containing pages 4, 5 and 3, 6, and the other 2, 7 and 1, 8. The collecting cylinder, which is one of the most curious contrivances of the whole machine, is now brought into play, and the first sheet to reach it has pages 4 and 5 on its lower surface and 3 and 6 on its upper surface. This sheet is by means of a switch carried once around by the cylinder, and is then met by the second sheet containing the other four pages, with pages 1 and 8 on its upper surface, and which will exactly overlap the first sheet. This last sheet has received from a paste wheel running in a trough a line of paste along its centre margin on its upper side, and this paste line causes it to adhere to the first sheet, and completes the eight-page paper. These united sheets are now switched off from the collecting cylinder and folded down the centre by the triangle and across the page by the folding cylinder, and piled in the same manner as the four-page sheets.

The Dispatch's History.

In October, 1850, Mr. James A. Cowardin, a practical printer, who had a training under Thomas Ritchie, and who had an experience as a publisher of the *Times* and *Compiler*, formed a partnership with his old comrade of the *Compiler*, W. H. Davis (also a practical printer), and they resolved to try again the enterprise of a newspaper; that is, a paper in which current news should have



THE STEAM TABLE.



THE SAWING MACHINE.